CABLE STRUCTURE FOR WEIGHT LIFTING EXERCISERS

FIELD OF THE INVENTION

The present invention relates to a cable structure including two Nylon layers having different colors so as to provide visible warning when the outer layer of the Nylon layer is worn out.

BACKGROUND OF THE INVENTION

A conventional weight lifting exerciser "A" is shown in Fig. 1 and includes a main frame with two guide rods 10 and weights 1 are movably mounted to the two rods 10. A cable 2 which has one end connected to the weights 1 and the other end of the cable 2 reeves through several pulleys 6 and is connected to a pulling handlebar 5. A user may pull the handlebar 5 downward to lift the weights 1 via the cable 2 to exercise his or her muscles. As shown in Fig. 2, the conventional cable 2 includes several steel wires 4 which are wrapped by an outer layer 3. As shown in Fig. 3, the cable 2 is operated with a tension which is made by the two pulleys 6 and an idle pulley 7 as displayed. The outer layer 3 will be worn out because of the friction with the pulleys 6 and 7, and the bundle of the steel wire 4 contacts the pulleys 6 and 7 directly. Eventually, the bundle of the steel wires 4 is broken. This could lead the users to a dangerous situation without any warning.

The present invention intends to provide a cable structure that includes two Nylon layers which have different colors so that when the outer Nylon layer is worn out, an obvious and visible color is seen by the users or the maintainers.

SUMMARY OF THE INVENTION

The present invention relates to a cable structure for weight lifting exerciser and the cable comprises a core comprising a braid of steel wires and a first Nylon layer is wrapped to an outer periphery of the core and a second Nylon layer is wrapped to an outer periphery of the first Nylon layer. The first Nylon layer and the second Nylon layer have different colors.

The primary object of the present invention is to provide a cable structure that includes a pre-warning feature when the outer Nylon layer is worn out.

The present invention will become more obvious from the following description when taken in connection with the accompanying drawings which show, for purposes of illustration only, a preferred embodiment in accordance with the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 shows a weight lifting exerciser having a cable to lift the weights;

Fig. 2 is a cross sectional view showing the conventional cable structure;

Fig. 3 shows the outer layer of the conventional cable is worn out by friction with the pulleys;

Fig. 4 is a cross sectional view of the cable structure of the present invention;

Fig. 5 is a perspective view to show the cable structure of the present invention, and

Fig. 6 shows the second Nylon layer of the cable structure of the present invention is worn out and the second Nylon layer is seen.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to Figs. 4 to 6, the cable 20 of the present invention comprises a core comprising a braid of six steel wires 24 which are located around a central wire 241 longitudinally. The central wire 241 can be made of Kevlar so as to increase the durable feature of the core. A first Nylon layer 23 is wrapped to an outer periphery of the core and a second Nylon layer 21 is wrapped to an outer periphery of the first Nylon layer 23. The first Nylon layer 23 and the second Nylon layer 21 have different colors. The colors cab be made by way of coating or any known methods. A mediate layer 22 is sandwiched between the first Nylon layer 23 and the second Nylon layer 21. The mediate layer 22 is woven to be a desired pattern and can be steel wires, aluminum wires, Nylon wires, plastic wires, cotton wires, fabric wires or any of compound mixture of the above mentioned material.

During operation of the cable 20 which reeves through the pulleys 6 and 7, and when the second Nylon layer 21 is worn out, the color of the first Nylon layer 23 can be seen by the users or the maintainers. The obvious color of the second Nylon layer 21 provides an early warning feature before the cable 20 is to be broken.

While we have shown and described the embodiment in accordance with the present invention, it should be clear to those skilled in the art that further

embodiments may be made without departing from the scope of the present invention.